edu Seed

LEGO SPIKE ESSENTIAL

Discover the Joy of Robotics with Our LEGO SPIKE Essential Course!

About Course

SPIKE Essential is a playful, hands-on STEM learning program designed to engage students in Grades 1 to 5 with exciting, real-world problems. Using LEGO bricks, intelligent hardware, and visual coding, children develop essential skills in a fun and creative way.

Curriculum Goals

- Develop computational thinking through hands-on coding
- Foster engineering and design skills
- Improve problem-solving and creative thinking
- Support storytelling and communication
- Strengthen core math and science concepts

Unit Structure

- Total of **10 Units**, each with story-based projects
- Follows a consistent flow: **Build → Code → Test → Reflect**
- Uses **Scratch-based block coding** via the Spike App

Unit Plans

1. Great Adventures

Focus: Storytelling, Sequencing

Theme: Characters go on exciting journeys

Skills: Collaboration, creativity, basic coding

2. Amazing Amusement Park

Focus: Engineering & Motion

Theme: Build and improve funfair rides

Skills: Gear systems, push/pull forces, iteration

3. Happy Traveller

Focus: Transportation & Programming

Theme: Solve real-world travel challenges

Skills: Planning routes, sequences, sensing

4. Crazy Carnival Games

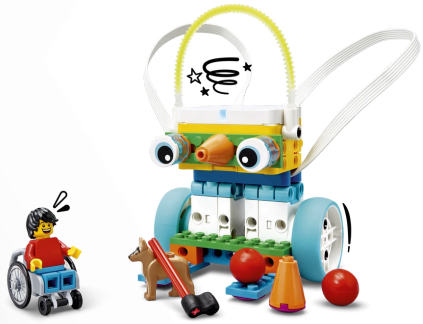
Focus: Game Design, Coding Logic

Theme: Create interactive carnival-style games

Skills: Loops, events, testing, debugging

Unit Plans

5. Quirky Creations

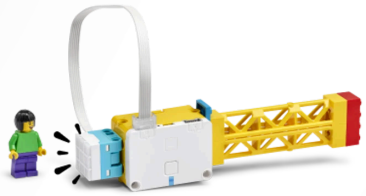


Focus: Innovation & Open-ended Challenges

Theme: Build wacky and useful inventions

Skills: Problem-solving, creativity, storytelling

6. Science – See It! Hear It! Build It!



Focus: Sensory Science & Inputs

Theme: Explore how we see, hear, and react

Skills: Sensing Light, sound, event-based coding

7. Animals and Their Environments

Focus: Biology & Environmental Science

Theme: abitats, adaptations, and survival skills

Skills: Modeling ecosystems, conditionals in coding

8. Science in Nature and Daily Life

Focus: Natural Science & Everyday Technology

Theme: Nature inspires inventions around us

Skills: pattern recognition, creative model design

Unit Plans

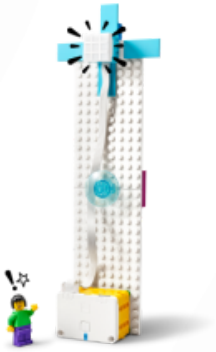
9. Science Connections

Focus: Real-World Applications of Science

Theme: Link science concepts to daily life

Skills: Engineering design, logical thinking, problem solving

10. Science We Can't See



Focus: Invisible Forces & Phenomena

Theme: Discover hidden forces like

Skills: Matter, Energy, Gravity, and Sound waves,

Get in Touch

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"A Journey of Imagination, Innovation, and STEM Discovery"